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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,322	11/19/2001	Hiromasa Ishiwata	356202/00	8420

7590 08/27/2003

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EXAMINER

VY, HUNG T

ART UNIT PAPER NUMBER

2828

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/988,322

Applicant(s)

ISHIWATA ET AL.

Examiner

Hung T Vy

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

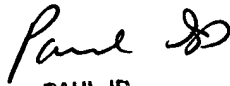
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-14 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 15 and 19-22 is/are rejected.
- 7) ☒ Claim(s) 3-7 and 16-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

  
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**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **Claim Rejections - 35 USC § 112**

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-22 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 15 and 21, the phrase "make said voltage difference small" renders the claim indefinite because it is unclear how can a driving circuit responding to said output voltage to control said driving current so as to make said voltage difference small. It is not clear which figures read claim 1 because the claim 1 recites amplifier circuit, driving circuit. It is not clear which figures read on claims 1, 15, and 21 because the claims recite only the amplifier circuit, driving circuit without recitation of element of invention in order be patentably distinct with fig. 8. Further, it not clears how a reference voltage and feedback voltage determine an output voltage responsive to a voltage difference and it not clear how generating the first time constant, second time constant, second time constant that is smaller than said first time constant.

Claims 2-7, and 15-22 depend from rejected claim 1, 15, and 21 thereby render these dependent claims indefinite.

### **Claim Rejections - 35 USC § 102**

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2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2, 15, and 19-20 are rejected under 35 U. S. C. § 102(b) as being anticipated by Kamioka et al., U.S. patent No. 5,831,951 or prior art.

Regarding to claims 1,2,15, and 19-20, Kamioka et al. disclosed in fig. 5 a control circuit for laser diode, comprising: an amplifier circuit producing at an output terminal and feedback voltage that is indicative of an optical power generated by laser diode (not shown) in response to a driving current flowing there through; a driving circuit responding to output voltage to control driving current so as to make voltage difference small; amplifier circuit driving output terminal with a first time constant during a steady operation and with second time second time constant (See column 4, line 53-58).

Regarding to claims 1,2,15, and 19-20, prior art discloses on fig. 8 read on limitations of claims.

3. Claims 21-22 are rejected under 35 U. S. C. § 102(b) as being anticipated by Rink et al., U.S. patent No. 4,950,268.

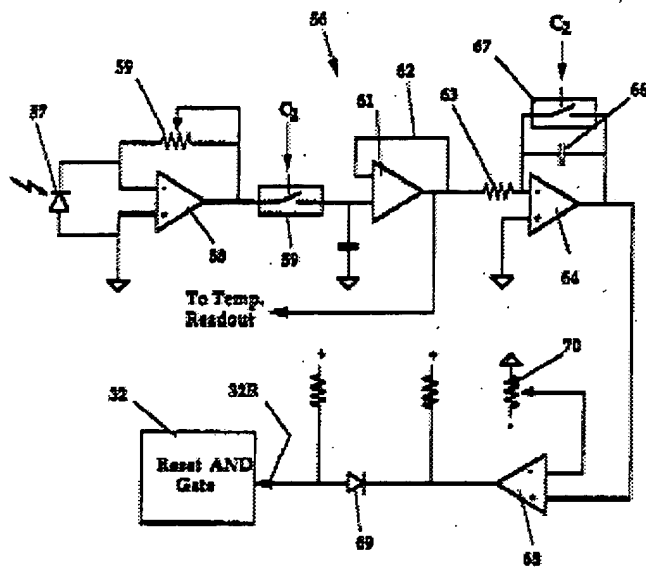
Regarding to claims 1,2,8 and 9, Rink disclosed in fig. 2 a control circuit for laser diode, comprising: an amplifier circuit (64) producing at an output terminal and feedback voltage that is indicative of an optical power via PD (57) generated by laser

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diode (not shown) in response to a driving current flowing there through; a driving circuit responding to output voltage to control driving current so as to make voltage difference small; a second amplifier circuit (61) producing at a second output terminal. (See Fig. below). It is inherent that amplifier circuit driving output terminal with a first time constant during a steady operation (created by two switch C2 ) and with second time second time constant because, when switch(67) is off (open) the gain the operation amplifier (66) is determined by the resistor (63) and capacitor (66), the RC operating to suppress overshoot and/or undershoot of the signal, thus amplifier (64) drives the terminal with a first time constant. When switch (67) is on (close) and switch (59) open then the operation of amplifier (64) functions as a voltage follower in spite of the resistor (63) and capacitor (66). Thus, the amplifier 64 drives with a second time constant that is smaller the first time constant. (See Fig. below);

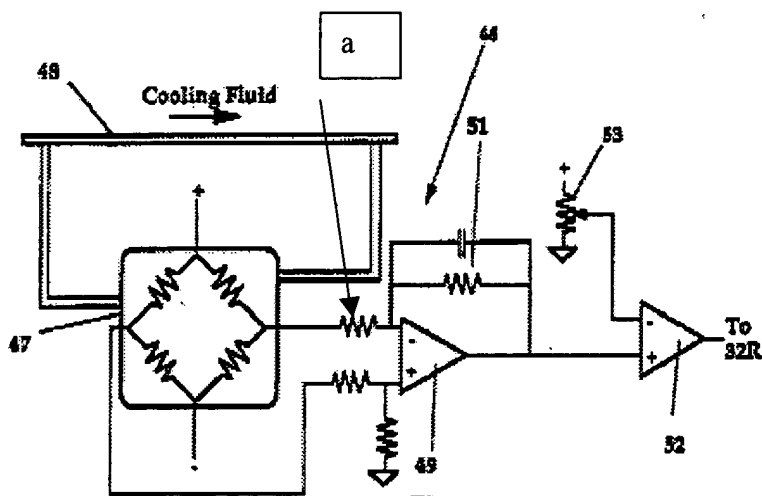
Regarding to claim 3, and 10 Rink discloses at least one of first and second amplifier circuit includes an operational amplifier (64 and 61), a capacitor (66) coupled between output and input ends of operation amplifier and first switch (67) coupled in parallel to capacitor (66) (See column 6, line 28 – 53 and Fig. below)

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Figure\_2

Regarding to claim 22, Rink discloses amplifier (49) circuit further a first resistor (a), a second resistor (51) coupled in parallel to capacitor (See fig. below).



Figure\_3

### **Allowable Subject Matter**

4. Claims 3-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, since the prior art of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed circuit, with a first switch coupled in parallel to said capacitor, the second switch coupled to said input end of said operational amplifier through said first resistor.

The following is a statement of reason for the indication of allowable subject matter:

5. 4Claims 8 -14 and 16-18 are considered allowable since the prior made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations having a first amplifier, second amplifier, first resistor, a second resistor coupled in parallel to said capacitor, the first switch and second switch. (U.S. Patent No. 5,831,951).

### **Response to Arguments**

6. Applicant's arguments filed 6/16/2003 have been fully considered but they are not persuasive. Claims 1, 15, and 21 are confusing, vague, and indefinite. For example, claims 1, 15 and 21 recite amplifier circuit, feed back voltage, driving circuit



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without any recitation of limitations in order to make voltage difference small and amplifier circuit driving said output terminal with a first time constant during a steady operation and with a second time constant that is smaller than said first time constant upon initiation and before said steady operation. The claim is not clear so examiner gives the broadest interpretation of the claim. Kamioka et al. or Rink or Prior art disclose the amplifier circuit, feed back voltage, driving circuit. *Rink shows an integrator 64.*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung VY whose telephone number is (703) 605-0757. The examiner can normally be reached on Monday-Friday 8:30 am - 5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul IP can be reached on (703) 308-3098. The fax numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



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Art Unit 2828

August 18, 2003